

## Syllabus

### Subject

<b>Subject / Group</b>	11444 - Master's Thesis / 1
<b>Degree</b>	Master's in Physics of Complex Systems
<b>Credits</b>	12
<b>Period</b>	2nd semester
<b>Language of instruction</b>	English

### Professors

Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
Pere Colet Rafecas	09:30	11:00	Monday	01/09/2018	31/07/2019	Despatx 210, Edifici Instituts Universitaris de Recerca. IFISC
Miguel Cornelles Soriano	12:00	13:00	Friday	11/02/2019	03/07/2019	Oficina 106, Instituts Universitaris
Juan Fernández Gracia	11:00	12:00	Wednesday	16/10/2018	30/06/2019	Ed. Instituts universitaris, S05 (basement)
Fernando Galve Conde	You need to book a date with the professor in order to attend a tutoring session.					
Damià Agustí Gomila Villalonga	10:30	12:00	Tuesday	03/09/2018	31/07/2019	Despatx 216/IFISC
Emilio Hernández García <a href="mailto:ehg899@uib.es">ehg899@uib.es</a>	10:00	11:30	Friday	01/10/2018	27/07/2019	IFISC, # 214
Konstantin Klemm -	14:00	15:00	Tuesday	06/05/2019	30/07/2019	102 / Serveis Cientificotècnics i instituts universitaris de recerca
Cristóbal López Sánchez	13:00	14:00	Monday	17/09/2018	05/07/2019	Edificio Instituts Universitaris
Manuel Alberto Matias Muriel	14:30	15:30	Wednesday	24/09/2018	05/07/2019	211 (Ed. Instituts Universitaris de Recerca)

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Lecturers	Office hours for students					
	Starting time	Finishing time	Day	Start date	End date	Office / Building
	14:30	15:30	Monday	24/09/2018	05/07/2019	211 (Ed. Instituts Universitaris de Recerca)
Claudio Rubén Mirasso Santos <a href="mailto:claudio.mirasso@uib.es">claudio.mirasso@uib.es</a>	12:30	13:30	Monday	03/09/2018	01/07/2019	202 Edificio Institutos Universitarios de Investigación
José Javier Ramasco Sukia <a href="mailto:jramasco@ifisc.uib-csic.es">jramasco@ifisc.uib-csic.es</a>	10:00	12:00	Monday	07/09/2018	30/09/2019	104 / Científico-Tecnico
Maximino San Miguel Ruibal <a href="mailto:mrs260@uib.es">mrs260@uib.es</a>	13:00	14:30	Wednesday	01/09/2018	26/07/2019	IFISC
Roberta Zambrini -	15:30	16:30	Tuesday	03/09/2018	01/07/2019	206

## Context

This is a project that the student carries out in the last part of the Master.

## Requirements

### Essential

The project has to be carried out under the supervision of one of the professors of the master. The project can be codirected by an external professor if it is approved by the Master Study Council.

## Skills

### Specific

- \* E4: To understand critical and cooperative phenomena from the perspective of cross-disciplinary physics and complex systems.. .

### Generic

- \* TG1: To be able to describe, both mathematically and physically, complex systems in different situations. .
- \* TG2: To acquire the capacity to develop a complete research plan covering from the bibliographic research and strategy to the conclusions. .
- \* TG4: To acquire the ability to ask questions, read and listen critically and participate actively in seminars and discussions. .

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\* TG5: To know to disseminate and present the concepts acquired at a non-expert audience. .

### Basic

\* You may consult the basic competencies students will have to achieve by the end of the Master's degree at the following address: [http://estudis.uib.cat/master/comp\\_basiques/](http://estudis.uib.cat/master/comp_basiques/)

## Content

### Range of topics

#### 1. Master's project

Project that the student carries out in the last part of the Master under the supervision of a professor.

## Teaching methodology

### In-class work activities (2 credits, 50 hours)

Modality	Name	Typ. Grp.	Description	Hours
ECTS tutorials	Tutorial sessions	Small group (P)	Individual meetings with the advisor of the project to supervise the evolution of the work.	49
Assessment	Public exposition	Large group (G)	The student must present a written report of the work carried out and the results obtained. Furthermore the student has to defend the project in a public oral presentation. The report and the public defense will be evaluated by a commission appointed by the Master Study Council.	1

At the beginning of the semester a schedule of the subject will be made available to students through the UIBdigital platform. The schedule shall at least include the dates when the continuing assessment tests will be conducted and the hand-in dates for the assignments. In addition, the lecturer shall inform students as to whether the subject work plan will be carried out through the schedule or through another way included in the Aula Digital platform.

### Distance education tasks (10 credits, 250 hours)

Modality	Name	Description	Hours
Individual self-study	Individual work	Work carried out by to student to complete the project. It includes search of bibliography, development of the project, obtention of results and development of conclusions.	75

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Modality	Name	Description	Hours
Individual self-study	Report	Preparation of a written report on the project, including an introduction to the topic, explanation of the methodology, contents of the work, results obtained and conclusions. Preparation of the oral presentation.	175

### Specific risks and protective measures

The learning activities of this course do not entail specific health or safety risks for the students and therefore no special protective measures are needed.

### Student learning assessment

#### Frau en elements d'avaluació

In accordance with article 33 of Academic regulations, "regardless of the disciplinary procedure that may be followed against the offending student, the demonstrably fraudulent performance of any of the evaluation elements included in the teaching guides of the subjects will lead, at the discretion of the teacher, a undervaluation in the qualification that may involve the qualification of "suspense 0" in the annual evaluation of the subject".

#### Tutorial sessions

Modality	ECTS tutorials
Technique	Observation techniques ( <b>non-retrievable</b> )
Description	Individual meetings with the advisor of the project to supervise the evolution of the work.
Assessment criteria	Capability and initiative of the student to carry out the project.

Final grade percentage: 30%

#### Public exposition

Modality	Assessment
Technique	Objective tests ( <b>non-retrievable</b> )
Description	The student must present a written report of the work carried out and the results obtained. Furthermore the student has to defend the project in a public oral presentation. The report and the public defense will be evaluated by a commission appointed by the Master Study Council.
Assessment criteria	Content and quality of the presentation.

Final grade percentage: 30%



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### Report

Modality	Individual self-study
Technique	Papers and projects ( <b>non-retrievable</b> )
Description	Preparation of a written report on the project, including an introduction to the topic, explanation of the methodology, contents of the work, results obtained and conclusions. Preparation of the oral presentation.
Assessment criteria	Development of project. Suitability of the methodology. Content of the work carried out. Validity of the results obtained. Relevance of the conclusions. Quality of the written report.

Final grade percentage: 40%

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### Resources, bibliography and additional documentation

Bibliography on the topic of the project will be provided by the supervisor depending on the subject to be addressed. The student may need to look for additional bibliography as part of the learning process.

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### Other resources

The student will be given access to suitable bibliographic sources either on printed form or electronically. Should that be necessary the student will be given access to IFISC computational facilities.

